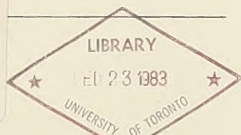


Managing Canada's Frontier Energy Resources

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The Canada Lands hold some of the best prospects for oil and gas to be found in the world. This immense expanse of land includes the two northern territories as well as all of the seabed surrounding Canada—an area that is almost twice the size of the 10 provinces. The Canada Lands, for which the federal government has responsibility, is an important energy storehouse for Canada's future.

Developing the energy resources of the Canada Lands in an orderly and responsible way demands skilled management. The authority for this management is the *Canada Oil and Gas Act*, proclaimed on March 5, 1982. This Act is a significant step toward achieving the goals of the National Energy Program: security of supply, opportunity for Canadians to participate in our petroleum industry and share its economic benefits, and fair sharing of oil and gas revenues.

CANADA LANDS



Previous legislation enacted 20 years ago was appropriate, as far as it went. It allowed us to gauge the potential of our frontier areas as a source of energy—an assessment we carried out largely with imported technology and skills.

But the world has changed, especially the petroleum world. We now have the experience and the technology to ensure that the Canada Lands actually contribute to our energy supply. The *Canada Oil and Gas Act* provides the means to take full advantage of the growing opportunities for Canadian participation. It also gives us the ability to set the pace of development to meet the requirements of Canadians living in these areas, and of Canada as a whole, paying close attention to the concerns of native people and to the protection of the environment.

At one time, it made sense for Canada to import some of the oil we needed. Foreign oil at world prices was readily available and less expensive than developing high-cost Canadian sources. But all that changed in the 1970s. Price increases, oil embargoes and the emergence of the Organization of Petroleum Exporting Countries (OPEC) caused the price of foreign oil to soar from \$19 per cubic metre (\$19/m³) in 1971 to almost \$220/m³ in 1982. It also meant that imported oil was no longer a secure energy source. It is now more economic and gives us greater security to develop remote oil and gas resources. In Canada, this means our frontier areas—the Canada Lands.

Large Potential, Large Expenditures

The resources that are estimated to lie beneath the Canada Lands are substantial, even allowing for the fact that only approximately 30 per cent of the estimated reserves may be within our technological reach at this time.

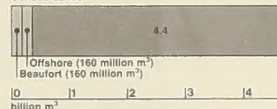
Tapping these frontier reserves will be expensive. Already \$5 billion has been spent on exploration in the Canada Lands. More exploration is required and the cost of bringing discoveries into production is even greater. According to the Blair-Carr Task Force on Major Energy Projects in Canada, no less than \$75 billion is going to be spent on this development in the Canada Lands over the next 15 years. Such spending will affect the economy of the entire nation. Good management is needed to ensure that the benefits accrue to Canadians. Parliament has recognized this is passing the *Canada Oil and Gas Act*.

COMPARISON OF CANADA LANDS AND CONVENTIONAL OIL AND GAS POTENTIAL

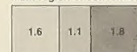
TOTAL ESTIMATED CONVENTIONAL OIL POTENTIAL Main region of conventional production



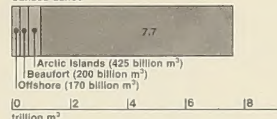
TOTAL ESTIMATED FRONTIER OIL POTENTIAL Canada Lands



TOTAL ESTIMATED CONVENTIONAL GAS POTENTIAL Main region of conventional production



TOTAL ESTIMATED FRONTIER GAS POTENTIAL Canada Lands



Bringing In the Energy When We Need It

The new legislation encourages vigorous efforts by energy explorers to find commercially viable fields in the Canada Lands and to identify those which can lead to future production. Under the Act, companies are first invited to bid for exploration and development rights through public tender. Firms selected must negotiate Exploration Agreements with the federal government. This system of Exploration Agreements replaces the previous system of permits that had resulted in the bulk of the energy prospects in the Canada Lands being held by relatively few companies, many of them foreign-owned. Although some companies pursued aggressive exploration programs, others were more concerned with operations that spanned the world. The net result was that the level of exploration and development activity carried out under the old legislation was sporadic and insufficient to meet Canadian needs. In addition, large areas of highly-promising land were being tied up by companies with minimal obligations to invest in exploration.

The new *Canada Oil and Gas Act*, through the Exploration Agreement mechanism, increases the pace of exploration and development. The terms of the Agreements are shorter—they are from three to five years in most cases rather than the 12 years granted under the old system—and they commit energy explorers to more intensive exploration and development activities. As a result, the new Act shortens the time-frame for the identification of energy reserves in the Canada Lands and will bring closer the time when these reserves can contribute to Canada's oil self-sufficiency.

Because the expenditures in exploration and development in the Canada Lands are so great, the Exploration Agreement process also serves as a mechanism to ensure higher levels of Canadian participation in the energy search and the provision of supplies and services that support it. Thus, a satisfactory Canada benefits plan must be submitted before the start of any work under an exploration agreement. This ensures that Canadians are given full and fair access on a competitive basis to the industrial and employment

benefits arising from exploration programs. And this is not just in the actual process of exploration—it includes the support industries such as construction, manufacturing, transportation and technical services that are required away from the actual exploration site.



The icebreaker Kigoriak in the Beaufort Sea

Sharing the Costs and the Benefits

The *Canada Oil and Gas Act* also provides Canadians with the opportunity to participate financially in exploration and development in the Canada Lands. The new legislation stipulates that the people of Canada, through the federal government, are entitled to a 25 per cent share in any oil and gas rights on the Canada Lands, not including fields already in production. If this share is converted into a working interest and assigned to Petro-Canada or another designated Crown corporation, all Canadians become active partners in frontier energy development.

A third way the Act ensures that benefits are provided to Canadians is through the royalties paid on oil and gas revenues from production on Canada Lands. The basic royalty is 10 per cent of oil and gas revenues, with an additional royalty of up to 40 per cent of net profits above a 25 per cent return on the investment of the exploration company. This ensures that Canadians benefit from the successful development of these national resources over and above a fair rate of return to the energy companies and their investors.

The new legislation also allows for expanded participation by Canadian companies by ensuring that there are substantially greater investment opportunities for Canadians in the development of these Canadian resources. These opportunities will be greatly enhanced by other measures under the National Energy Program, particularly the generous Petroleum Incentives Program, which offers payments to Canadian owned and controlled companies for exploration and development activities. In the Canada Lands, these payments can go as high as 80 per cent of exploration costs.

Managing Development with Concern and Care

Equally important for Canadians and the development of frontier energy sources is the protection of the environment and the rights of native people living in areas affected by exploration and development. The *Canada Oil and Gas Act* reinforces drilling regulations and practices of the *Oil and Gas Production and Conservation Act* that were already stringent. Oil and gas development cannot be carried out at the expense of the environment or of such activities as fishing, trapping and hunting. Measures to ensure fullest protection of the environment are included in all Exploration Agreements.

When drilling is under way, operators must file daily reports describing the events and weather of the preceding 24 hours as well as the operations planned for the next 24 hours. They also must advise Government officials immediately in the event of an accident, blowout or spill—or if they get a significant show of oil or gas.

In addition, experienced Government engineers visit drill sites on a regular basis to test thoroughly the safety and adequacy of drilling equipment. These visits are made at least once every 20 days, but in the case of a new operator or a new type of operation, a visit is made once every 10 days. During critical periods such as during testing or when the operator is drilling in high pressure formations, the visits are even more frequent.

Precautions such as these are instrumental in maintaining Canada's excellent environmental protection record. However, to make sure that operators are properly prepared, the effectiveness and mobility of emergency cleanup equipment is regularly tested in simulated operations. Operators also enter into agreements under the *Canada Oil and Gas Act* whereby they accept liability for cleanup costs and for any damages to third parties (such as fishermen or native hunters) that might result from a spill.

One element of protecting the environment is understanding it better. The new legislation provides for the funding of regional environmental impact studies of energy exploration and development activities, and ensures the participation of local peoples in this evaluation process.

The commitment of the Government of Canada to respect the rights of Canada's native peoples is reflected in the new legislation. The *Canada Oil and Gas Act* expressly states that any title, right or claim which the native peoples hold will remain unaffected by the Act's provisions.

As well, the Act establishes the means by which native and other groups can be given a voice in the process of energy management in the Canada Lands. It provides for the establishment of advisory bodies to allow local residents to express concerns regarding the pace, direction and socio-economic and cultural impacts of oil and gas exploration and development.

The new Act also provides an opportunity for native peoples to participate directly in the search for energy in the Canada Lands. The *Canada Oil and Gas Act* provides for Government affirmative-action employment and training programs for aboriginal peoples.

Canada Lands Development: Energy and Jobs

The *Canada Oil and Gas Act* will provide many opportunities for Canadian investment in exploration and development and its supporting activities—shipbuilding, equipment construction, steel fabrication, hardware manufacture, communications, transportation, technical and catering services, to name a few. And that means Canadian jobs and incomes, and a better chance to enlarge Canadian skills and technologies.

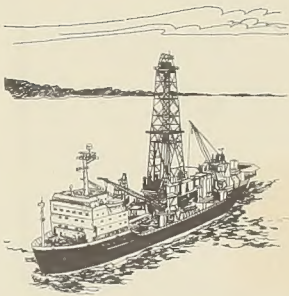


The search for Canadian reserves of oil and gas is already having a significant and positive effect on our economy. Companies across Canada are working to supply the equipment and services required for exploration and development in the Canada Lands. A semi-submersible drilling rig for the Canadian Atlantic offshore is being built in a Saint John, New Brunswick shipyard; a Vancouver shipyard is building several supply and support vessels that can operate safely in the icy waters of the Beaufort Sea; and Montreal-based companies supplied a wide range of goods and services to assist in the search for energy in the Arctic Islands.

Making Management Happen

The administration of the *Canada Oil and Gas Act*, the *Oil and Gas Production and Conservation Act*, and the various regulations that apply to oil and gas exploration in the Canada Lands is carried out by a new agency called the Canada Oil and Gas Lands Administration (COGLA). COGLA's staff includes geologists, geophysicists, engineers, technicians and inspectors. These experts provide the Government with the technical advice required for decisions on the timing, direction, rate, and level of exploration and development; they negotiate Exploration Agreements and issue Drilling Permits and Production Licences; they conduct ongoing geophysical research and geological assessments of the quantity and quality of oil and gas reserves in the Canada Lands; and they ensure drilling operations are carried out in a manner that produces maximum protection of the environment and safe working conditions through constant monitoring and regular inspections.

Another way that the Act provides Canadians with the opportunity to participate in frontier development is through the establishment of a minimum level of 50 per cent Canadian ownership in all oil and gas production in the Canada Lands. If this level has not been met by the time the project developer decides to bring a well into production, the difference between the actual Canadian ownership and the 50 per cent minimum level reverts to the Crown.



Drillship in Labrador Sea

By applying sound resource management practices, COGLA is helping ensure that the oil and gas from the Canada Lands will contribute to both energy security and long-term economic benefits in the spirit of the *Canada Oil and Gas Act*.

As a result of the Canada-Nova Scotia Offshore Agreement, COGLA is working closely with the Government of Nova Scotia in a cooperative management system for the development of offshore oil and gas near Nova Scotia.

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